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| 10/824,107      | 04/14/2004  | Wayne O. Duescher    | 638.014US1          | 7549             |

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| EXAMINER |
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LAZORCIK, JASON L

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1731

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03/01/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

10/824,107

Applicant(s)

DUESCHER, WAYNE O.

Examiner

Jason L. Lazorcik

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**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 07 February 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☒ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: 2-21.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Attached Advisory Action Detail.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: \_\_\_\_\_.

  
STEVEN P. GRIFFIN

SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700

**Advisory Action Detail**

Applicants arguments have been considered but do not place the application in condition for allowance.

The Examiners rejection will here be briefly restated to assist Applicants understanding of the grounds of the rejection;

- 1) Berg teaches a mold or cell sheet having an array of through holes and each hole having a cross sectional area and a "nominal thickness"
- 2) A dispersion is prepared comprising a liquid solution of inorganic oxides and water to prepare a liquid solution
- 3) The array of through holes is filled with the liquid solution to form mixture volumes
- 4) As indicated in the previous office action, although a portion of the liquid is removed from the entrained dispersion, even in the most extreme scenario presented the mixture volumes **still contain approximately 30% liquid by weight**. Since liquid remains in the mixture volumes, said mixture volumes are rightfully considered, by the broadest reasonable interpretation of the term, to be "**liquid mixture volumes**".
- 5) These liquid mixture volumes are ejected from the cell sheet by application of a pressure or an "impinging jet".
- 6) Berg teaches that after ejection "some of the edges may become rounded".  
**In the absence of any compelling evidence to the contrary**, it is the

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Examiners position that this rounding effect occurs at least in part due to surface tension forces. In combination with the Berg teaching of truncated spherical or truncated spheroidal geometries for the particles, the Berg process is understood to provide for ejected, independent liquid mixture solution entities having a spherical shape and subject to surface tension forces.

- The reference to Zhai is pointed to at this point simply to provide supporting evidence that high solids content slurries of similar albeit not identical composition are subject to deformation by surface tension forces. Restated, the rejection as presented does not turn upon the disclosure provided by Zhai, however said reference does provide further supporting evidence for the action of surface tension upon the ejected "liquid mixture volumes".

- 7) The entities are dried outside of the mold or equivalently subjected to a solidification environment
- 8) The dried entities are ultimately subjected to a sintering process to produce sintered beads.

Applicant argues the Berg particles are not liquid, whatever their liquid content. As reiterated above, the Berg particles contain a substantial fraction of liquid when ejected from the mold and are therefore correctly categorized as "liquid mixture volumes" in accord with the broadest reasonable interpretation of the term.

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Applicant further argues that the Berg particles are not spherical. It is the Examiners position that the record regarding the interpretation of the term spherical as previously presented is clear and appropriately reads upon Applicants claim language.

Applicant provides an exhaustive set of arguments with the intent to prove the inapplicability of the Zhai reference towards the teachings of Berg. As pointed out above, the Zhai reference is not essential to the rejection under Berg. Rather Zhai has been cited strictly in order to provide supporting evidence for the effects of surface tension upon slurries of similar (not identical) composition with similar solids content (e.g. ~70% solids). In the absence of any compelling evidence to the contrary, it is the Examiners position that the rounding effect disclosed by Berg is at least in part due to surface tension forces. Applicants arguments with respect to the applicability of the Zhai reference have been fully considered, however they do not affect the applicability of Berg to the presented claims, and are therefore considered moot.

**Notice of Non-Compliant  
Amendment (37 CFR 1.121)**

Application No.

10/824,107

Examiner

Jason L. Lazorcik

Applicant(s)

DUESCHER, WAYNE O.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

The amendment document filed on 07 February 2007 is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121 or 1.4. In order for the amendment document to be compliant, correction of the following item(s) is required.

THE FOLLOWING MARKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

- ☐ 1. Amendments to the specification:
- ☐ A. Amended paragraph(s) do not include markings.
  - ☐ B. New paragraph(s) should not be underlined.
  - ☐ C. Other \_\_\_\_\_.
- ☐ 2. Abstract:
- ☐ A. Not presented on a separate sheet. 37 CFR 1.72.
  - ☐ B. Other \_\_\_\_\_.
- ☐ 3. Amendments to the drawings:
- ☐ A. The drawings are not properly identified in the top margin as "Replacement Sheet," "New Sheet," or "Annotated Sheet" as required by 37 CFR 1.121(d).
  - ☐ B. The practice of submitting proposed drawing correction has been eliminated. Replacement drawings showing amended figures, without markings, in compliance with 37 CFR 1.84 are required.
  - ☐ C. Other \_\_\_\_\_.
- ☒ 4. Amendments to the claims:
- ☐ A. A complete listing of all of the claims is not present.
  - ☐ B. The listing of claims does not include the text of all pending claims (including withdrawn claims)
  - ☒ C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified. Note: the status of every claim must be indicated after its claim number by using one of the following status identifiers: (Original), (Currently amended), (Canceled), (Previously presented), (New), (Not entered), (Withdrawn) and (Withdrawn-currently amended).
  - ☐ D. The claims of this amendment paper have not been presented in ascending numerical order.
  - ☒ E. Other: See Continuation Sheet.
- ☐ 5. Other (e.g., the amendment is unsigned or not signed in accordance with 37 CFR 1.4):  
\_\_\_\_\_

For further explanation of the amendment format required by 37 CFR 1.121, see MPEP § 714.

**TIME PERIODS FOR FILING A REPLY TO THIS NOTICE:**

1. Applicant is given **no new time period** if the non-compliant amendment is an after-final amendment or an amendment filed after allowance. If applicant wishes to resubmit the non-compliant after-final amendment with corrections, the **entire corrected amendment** must be resubmitted.
2. Applicant is given **one month**, or thirty (30) days, whichever is longer, from the mail date of this notice to supply the correction, if the non-compliant amendment is one of the following: a preliminary amendment, a non-final amendment (including a submission for a request for continued examination (RCE) under 37 CFR 1.114), a supplemental amendment filed within a suspension period under 37 CFR 1.103(a) or (c), and an amendment filed in response to a *Quayle* action. If any of above boxes 1. to 4. are checked, the correction required is only the **corrected section** of the non-compliant amendment in compliance with 37 CFR 1.121.

**Extensions of time** are available under 37 CFR 1.136(a) only if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action.

**Failure to timely respond** to this notice will result in:

**Abandonment** of the application if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action; or

**Non-entry** of the amendment if the non-compliant amendment is a preliminary amendment or supplemental amendment.

Legal Instruments Examiner (LIE), if applicable

Telephone No.



Continuation of 4(e) Other: Claim 2 is identified as "(PREVIOUSLY PRESENTED)" but it includes underlining which is used to identify newly added material.